28th Session of the Sub-Committee of Experts
on the Transport of Dangerous Goods (UNSCOE TDG)
28 November – 7 December 2005
Summary of Proposals and Results

Note: This was the second of the TDG Sub-Committee's four meetings scheduled to be held during the 2005/2006 biennium. The main purpose of this meeting was to consider proposed amendments and updates to the UN Recommendations on the Transport of Dangerous Goods, also known as the UN "Model Regulations". The amendments developed by the Sub-Committee during the four meetings in this biennium will be submitted for final consideration and approval at the 3rd session of the UN Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals in December 2006. Once approved by the Committee, the amendments will be incorporated into the 15th Revised Edition of the UN Model Regulations and will be incorporated into the IMDG Code and ICAO TI from January 1, 2009.

UN Papers for the 28th session may be downloaded from the UN Transport Division website at:
http://www.unece.org/trans/main/dgdb/dgsubc/c32005.html
Visit the website of the Office of Hazardous Materials Safety's Director of International Standards at: http://hazmat.dot.gov/intstandards.htm for pertinent information relative to the office's international activities including: Schedules of International Meetings, The UN Recommendations on the Transport of Dangerous Goods (UN Model Regulation), The UN Committee and Sub-Committee of Experts on the Transport of Dangerous Goods, International Atomic Energy Agency International Maritime Organization's Dangerous Goods, Solid Cargoes and Containers (DSC) Sub-Committee, International Civil Aviation Organization (ICAO) Dangerous Goods Panel European Agreements Concerning the International Carriage of Dangerous Goods by Road (ADR) and Rail (RID) North American Free Trade Agreement (NAFTA) Hazardous Materials Land Transportation Standards Sub-Committee.

Paper #	Paper Title/Summary	Comments
	AGENDA ITEM 2 – TRANSPORT OF GASES	
2005/25	**Proposals to amend Chapter 6.2 (EIGA)** – EIGA identifies an effort by an ad hoc working group establishing by the Joint Meeting of the RID Safety Committee and the UNECE	The US supported this proposal in principle. We agreed that the text in Proposal I was slightly clearer than the current text. For Proposal II, we

	Working Party on the Transport of Dangerous Goods to revise the text of Chapter 6.2. Their goal was to make it more user friendly by clarifying the text and eliminating redundancy. This paper presents two proposals based on this effort: (1) Change 6.2.1.3.1 from "Except for pressure relief devices, valves, piping, fittings and other equipment subjected to pressure, shall be designed and constructed to withstand at least 1.5 times the test pressure of the pressure receptacles." The proposed new text would read, "Valves, piping and other fittings subjected to pressure, excluding pressure relief devices, shall be designed and constructed so that the burst pressure is at least 1.5 times the test pressure of the pressure receptacle." This proposal attempts to clarify the requirement by restructuring the sentence and to define what is meant by the term "to withstand" by specifying the burst pressure. (2) Change 6.2.1.1.6 to add requirements from the RID/ADR that address that the manifold shall have at least the same test pressure as the cylinders and that the master valves (in addition to the manifold) shall be protected from impact.	agreed that valves must be protected from impact. However, we questioned use of the term "master valve" and suggested the protection requirement should address the entire manifold assembly. **Result:** We supported the proposal as amended in the US document INF.25. Proposal 1 was adopted as proposed by EIGA. For the second proposal, the Sub-Committee adopted the text proposed in INF.25 for including the entire manifold assembly as requiring protection from impact and forces normally encountered in transport. The suggestion by the US to modify the last sentence in 6.2.1.1.6 by deleting the word "liquefied", thereby making the requirement applicable to all toxic gases was not accepted. EIGA did not believe that toxic gases other than liquefied would be transported in this manner. The US also discussed the need for general requirements on bundle frames and provided some draft text based on text recently proposed in HM-220E and based on an EN standard. The US intends to submit that text as a formal proposal to the July 2006 session.
INF.25	**Comments to ST/SG/AC.10/C.3/2005/35 Proposals to amend Chapter 6.2** (USA) In this document the US supports the EIGA proposal to amend 6.2.1.1.6 with some modifications. Additionally, the US provided suggested text to bring general design requirements for bundle frames into the UN Model Regulations and requested comment from the Sub-Committee. The suggested text from the US is based on HM-220E and EN 13769.	

2005/26 **INF.26** **INF.45**	**Proposals to amend P200 special packing provisions 'n' (EIGA) –** EIGA recommends modifying the text in special provision "n" of P200 which applies to Flourine, Compressed and Oxygen Difluoride, Compressed. The proposed text more clearly states that individual cylinders must contain a shut-off valve, and that cylinders and individual cylinders within a bundle should be limited to 5 kg. The paper presents two options for recommended text. **Comments on document ST/SG/AC.10/C.3/2005/26 from EIGA** (Belgium) Belgium supports Proposal 2 from EIGA and proposes alternative wording. **Proposal to rationalize the language used for groups of cylinders within bundles and MEGCs** (EIGA) This document proposes to clarify the use of the terms "groups" or "assemblies" of cylinders.	The US supported the proposal and preferred Proposal 2. However, we questioned the proposal to delete the words "assemblies of cylinders" for UN 2190 Oxygen Diflouride that it would result in eliminating a safety limitation necessary for that material. We also questioned what was meant by the terms "assemblies" of cylinders and how that differed from the definition of a bundle. **Result:** The Sub-Committee adopted the proposal as amended by INF.45. INF.45 was a collaborated effort of numerous delegations including the US.
2005/35	**Proposal to reinstate the requirement for the application of orientation arrows to closed cryogenic receptacles (5.2.1.9) (EIGA) -** EIGA proposes to require orientation labels on closed cyrogenic receptacles. This is due to the fact that the pressure relief device inlets must be situated in the vapor space of the receptacle under maximum filling conditions.	We supported this proposal. However, we suggested the word "closed" be deleted from the proposed 5.2.1.7.2(a). Both open and closed cryogenic receptacles should bear the orientation arrows. **Result:** This proposal was adopted. Based on an US intervention, the word "closed" was deleted from EIGAs proposed 5.2.1.7. Although it was recognized that the sentence in 5.2.1.7 was dealing with pressure receptacles and an open

		cryogenic receptacle is not under pressure, the Sub-Committee felt it was helpful to not specify open or closed cryogenic receptacles and reference cryogenic receptacles in general.
2005/55	**P200 filling ratio amendments (USA)** – The filling ratio values in P200 were initially based on values from 49 CFR and ADR. To verify these values on the basis of the filling criteria provided in P200, the US sponsored a study by NIST. Germany and the US agreed to develop proposed recommendations for amending the filling ratios listed in P200 based on the results of the NIST study and held a working group including industry representatives in July 2005. This proposal recommends changes to entries identified as requiring lower filling ratio values.	This paper was the first step in the validation process for the P200 filling ratios. The working group also recognized that the NIST results indicated filling ratio values that could be increased. As follow-on to this proposal, the US intends to work with Germany, NIST and other interested parties to verify the data for increasing a number of values and this may result in a future proposal. **Result:** This proposal was adopted, with one gas (Germane) being placed in brackets. Some delegations voiced concern with the accuracy of the values since they were not a party to the working group, while others agreed that the results of the DOT and NIST work have been presented to the Sub-Committee a few times over the last couple of years. There was concern that Germane should be lowered even further than proposed. Although strictly applying the criteria provided the value presented in this proposal, it was industry practice to ship Germane at a much lower filling ratio. The US agreed to provide a proposal specific to Germane to the July 2006 session.
	AGENDA ITEM 3 – PACKAGINGS (INCLUDING IBCS AND LARGE PACKAGINS)	
2005/57	**Drop test for IBC; Modification of the criterion for**	During its 27th session, the Sub-Committee

	passing the Drop tests applied to IBCs (Argentina) - Consistent with text in 6.1.5.3.6.3 and 6.1.5.3.6.4, this paper proposes to amend paragraph 6.5.6.9.5 "Criterion for passing the test" corresponding to the IBC drop test by adding the sentence: "The IBC shall not exhibit any damage liable to affect safety during transport." The proposal is intended to address the integrity of the package for continued transport.	adopted terms of reference for an informal working group on IBC performance testing. The US participated in this meeting held in Paris Oct 10-13. The Sub-Committee agreed to consider the issue raised in this paper during the discussion on INF.5.

INF.5 **Add 1-2**	**Report of the Informal Working Group on IBCs.** The working group report presented numerous recommendations that served as the basis for the Sub-Committee's discussions on performance testing and use of IBCs.	The US participated in this working group and supported the working group recommendations. **Results:** After presentation of the report, there was some general discussion on the fundamental principle of this effort. Some experts questioned the demonstrated need for any changes to the IBC testing requirements. Others disagreed and voiced the general opinion of the working group that their evaluation identified areas that should be amended to enhance the safety of these packagings. The Sub-Committee than discussed each topic of the working group report one at a time, placing emphasis on developing clear guidance and establishing priorities for the informal working group's subsequent efforts.
INF.24	**Additonal Information on the Report of the Working Group** (ICCP)	
INF.31	**Comments on the Report of the Working Group-UV Degradation** (Germany)	
INF.32	**Comments on the Report of the Working Group-leakproofness test; limitation of deformation** (Germany)	
INF.27	**Secondary means of closure on bottom openings** (Australia)	
INF.29	**Water Resistance of IBCs** (Australia)	**Ultraviolet radiation protection**: The Sub-Committee agreed there was a need to enhance the requirements in the Model Regulations in order to improve the resistance to ultraviolet radiation of flexible, rigid plastic, and composite IBCs. The Sub-Committee recognized this requirement should not try to address the extreme conditions possible in different areas of the world. The US supported this approach. Germany agreed to prepare a proposal for the next session. **Single-trip IBCs**: The Sub-Committee agreed that there was no need to develop a separate category and separate testing/marking requirements for IBCs which might be designed or intended for a single shipment. It was agreed by the Sub-Committee to not pursue this issue further in this biennium. The US supported this approach.
INF.33	**Protection and strength of bottom discharge valves on IBC's** (Australia)	

INF.15	**Limit of vapour pressure for authorizing the use of IBC's** (Italy) Italy suggests that the vapour pressure limits of 4.1.1.10 are applicable to rigid plastics and composite IBCs, in additional to metal.	**Results:** The Sub-Committee adopted this proposal. Italy proposed that the vapor pressure limits of 4.1.1.10 were valid, not only for metal IBCs intended to contain liquids, but also for rigid plastic or composite IBCs. The final result was to delete the word "Metal" at the beginning of 4.1.1.10.

2005/33	**Comments on ST/SG/AC.10/C.3/2005/15 (USA)** – The US proposes to clarify an interpretation problem related to differing text between the ICAO TI and the UN Model Regulations concerning infectious substance packaging. Infectious substance packaging must be able to withstanding a 95 kPa pressure differential test and be able to withstand temperature extremes. The confusion has been whether the pressure differential test must be conducted at temperature extremes. This paper seeks to clarify the situation by separating the two requirements into two separate sub-paragraphs in P620.	US proposal. **Results:** Several delegations shared the opinion of the US that the requirement was in need of clarification. However, others didn't feel that the text was different between the UNMR and the ICAO TI. Some experts felt the text from the ICAO should be considered the appropriate text as this was primarily an air transport concern. Other experts pointed out that a test method should be specified. The US indicated we would look at incident data for low temperature failure. Additionally, we are interested in working with ISO to determine an appropriate test method and requested input from other Competent Authorities on how each is performing this test. The US stated they would consider preparing a new proposal for the next session based on the comments received.
2005/49	**Revision of Chapter 6.3 (United Kingdom)** – This is an amended proposal based on a UK paper submitted to the last session (2005/15). The UK states that the text in Chapter 6.3 (Requirements for the Construction and Testing of Packagings for Division 6.2 Substances) of the UN Model Regulations is inconsistent with packaging text in other chapters, and is inadequate and conflicting in certain areas. This proposal attempts to align Chapter 6.3 consistent with other packaging chapters without changing the test requirements. The UK has provided this draft rewrite of Chapter 6.3 based on comments received at the last session.	The US supported enhancing the consistency of this chapter with other packaging chapters. **Results**: A lunchtime working group was held to resolve comments experts expressed on this proposal. INF.44 reflects the outcome of the lunchtime working group. The Sub-Committee adopted the proposals in 2005/49 as amended by INF.44.

INF.41 **INF.44**	**Review of Chapter 6.3 – tracked changes** (United Kingdom) **Chapter 6.3** (United Kingdom)	
2005/37	**Recycled plastics material ISO 16103 (United Kingdom)** - During the 27th session of the UNTDG, ISO presented the status of ISO 16103 on recycled plastic material. That standard has now been adopted by ISO. The UK recommends adding a note to the definition of Recycled Plastic Materials in 1.2.1 to reference the ISO standard as guidance on procedures that competent authorities may use to approve the use of recycled plastics material.	The US was tentatively in support of this proposal pending receipt of additional information prior to the meeting. After our internal review raised numerous questions, we felt it would be prudent to defer this proposal until the next session to allow further review. **Result:** The US did not support this proposal for adoption at this session. We felt that the standard was too restrictive in some areas, while not restrictive enough in others. The US has issued an approval for the use of recycled plastic materials. We felt that certain aspects of that approval should be considered by the ISO technical committee. The US asked for additional time to continue necessary work on the standard. Other experts felt that simply providing this reference as a Note identifying guidance material did not require the ISO document to be perfect. The proposal was voted on and adopted.
	AGENDA ITEM 4 – LIMITED QUANTITIES	
2005/42	**Excepted quantities (United Kingdom)** - The Sub-Committee has discussed at length the issue of reforming the limited quantity provisions with the intent of establishing acceptable requirements to enhance harmonization between transport modes. This paper is a revised proposal to a paper	The U.S. agreed with this proposal in principle. We have been in favor of including excepted quantity provisions, based on the ICAO provisions, to enhance intermodal harmonization. We supported the idea to separate the proposed

	the UK presented at the last session to introduce Excepted Quantity provisions based on the existing ICAO air mode requirements. This paper attempts in take into account comments received from their last proposal.	excepted quantity provisions from Chapter 3.4 to clarify that those provisions are not a subset of the limited quantity provisions. Rather these provisions contain distinct requirements that provide an adequate level of safety. We believe placing these provisions in a new Chapter 3.5 provides the most user friendly option. Comments on the Proposal: X.1.2 - There is a sentence that references authorization to transport by aircraft only if the material is permitted for transport on passenger aircraft by the ICAO TI. As written we do not believe this reference is necessary in the UN Model Regulations since it identifies a modal issue that should be addressed specifically by the ICAO TI. However, if the intent of this statement is to identify those materials that are acceptable for the provision, we agree those should be consistent with the ICAO TI. Specifically, only those materials authorized as cargo on passenger aircraft should be authorized under the excepted quantities provisions. We are interested in receiving comments on the most appropriate way to identify this restriction. We are considering a list based system in the new Chapter, or possibly adding a Special Provision to the table for those materials that are authorized to utilize the excepted quantities provision.

		Table X.1.1 - We support including all Classes/Divisions for clarity. We also agree that the quantities should align with ICAO TI quantities. X.1.3 - As an editorial suggestion, the words "shall be in compliance with" should be replaced with "shall conform to" X.1.3(a)- The minimum thickness requirement for plastic inners applies to both liquids and solids in ICAO, and the UK is proposing it apply only to liquids. In addition, the restriction that inner packagings not be liquid full at 55 deg. C has been omitted. We will propose the provisions stay in line with ICAO on both of these issues. X.1.4.3. This section prescribes a new marking requirement for excepted quantities. We could support a new marking requirement, but request comments from the interested public on the most appropriate marking. X.1.5. This is a requirement for marking of transport units containing over 1,000 kg gross weight of dangerous goods in excepted quantities. We can support this proposal. X.1.6. This is a requirement for shipping paper entry for dangerous goods in excepted quantities containing over 1,000 kg gross weight. We can

		support this proposal in principle but believe the text needs to be clarified. We believe this requirement should apply to the transport unit as well. Perhaps the simplest solution would be to add a sentence at the end of the proposed X.1.5 to read: "Additionally, the transport documentation shall include the statement "Dangerous Goods in excepted quantities." **Results:** The Sub-Committee showed general support for the proposal to introduce Excepted Quantities provisions into the UN Model Regulations. Two lunchtime informal working group meetings were held during which agreements in principle were reached on issues discussed in plenary. The three most expressed concerns focused on how to identify materials authorized to use the Excepted Quantities provisions, the appropriate mark and whether or not a document entry was necessary for large amounts of packaged goods in a cargo transport unit. The working group favored identifying materials that are authorized to use the provision by splitting the limited quantity column in the Dangerous Goods List with a diagonal line; the top left indicating the limited quantity authorization and bottom right the Excepted Quantities authorization. There was some support for a marking that would resemble the IATA Excepted Quantities label – red hatch

		border, the words “Dangerous Goods in Excepted Quantities” and possibly an indication of the hazard class. There was also some discussion of limiting the number of packages authorized in a cargo transport unit (no limit was set) instead of requiring a transport or other documentation entry. The UK and Canada will submit a formal proposal at the next session based on the comments received.
	AGENDA ITEM 5 – LISTING, CLASSIFICATION AND PACKING	
2005/16	**Fuel cell systems containing flammable gas (Japan)** – This is the same proposal Japan submitted to the last session of the Sub-Committee, but asked that it be deferred to this session for consideration. The proposal follows previous proposals presented to the 25th and 26th sessions of the Sub-Committee related to fuel cell cartridges containing flammable gas classified as a Class 9 article. The Sub-Committee did not adopt a previous proposal to assign these articles as Class 9, but invited Japan to present a revised proposal based on comments received. In this proposal, the expert from Japan recommends the addition of requirements for a “Fuel cell system” which they define as a fuel cell cartridge that is the refillable receptacle containing metal hydride and hydrogen, with or without a fuel cell power unit as an electric generating device. Japan is proposing: 1. A new entry in the DGL for Fuel Cell System, UN3xxx, Class 2.1. 2. A new Special Provision for a fuel cell system containing hydrogen and metal hydride that specifies classification and transport condition requirements.	We anticipated this paper would be withdrawn based on submission of the joint Japan – US proposal 2005/32. **Result:** Japan withdrew this document.

	3. Modify P003 to include a new special packaging provision (PPxx) specifying packaging requirements for this new entry. 4. New tests in the Manual of Tests and Criteria, Part III for fuel cell systems.	
2005/32	**Requirements for hydrogen absorbed in a metal hydride storage system (Japan and USA) -** This paper proposes to include a new packing instruction for the entry "HYDROGEN IN A METAL HYDRIDE STORAGE SYSTEM, (UN3468)" and to amend the proper shipping name to address equipment containing or packed with hydrogen storage systems. The proposal is based on ISO 16111 which addresses the safe design and use of storage systems, including all necessary valves, relief devices, and appurtenances, intended for use with reversible metal hydride hydrogen storage systems. The standard requires successful completion of rigorous type testing, including: a Fire Test; a Drop Test from 1.8 m in several orientations; a Leak Test to ensure no leakage of hydrogen gas; and a hydrogen cycling and strain measurement test, which includes extensive vibration of the canister between charge cycles to induce worst-case material settling conditions. The proposed packing instruction relies on the ISO 16111 standard to ensure safety of such systems during use and transport and also addresses filling and packaging for equipment packed with or containing storage systems. The packing instruction includes an exception for small storage systems with an internal volume of not more than 120 ml consistent with the requirements of the International Electrotechnical Commission (IEC) Standard for micro fuel	After further review, we recognized that this proposal needed some slight amendments. Primarily, ISO 16111 is not a final standard yet. Therefore, it would be inappropriate to reference the standard in the UN Modal Regulations at this time. The US asked the Sub-Committee to take decision on the amendment to the description - Proper Shipping Name, but asked that the remainder of the proposal be deferred until the next session. **Result:** The Sub-Committee discussed the possibility of numerous future proposals coming forward as the fuel cell technology develops. Several experts expressed a preference that these articles could be dealt with through a more rationalized approach, rather than a case-by-case consideration. For example, fuel cells, cartridges, and equipment could possibly be classified according to the hazard class of the chemical contained rather than the exact composition of the article. The Sub-Committee agreed it was not appropriate at this time to include a reference to ISO 16111. However, the Sub-Committee did adopt the proposal from the US to amend the

	cells, IEC 62282-6-1 Micro Fuel Cell Safety Standard.	Proper Shipping Name for UN 3468.
2005/27 **INF.17**	**Nitric acid UN 2031 (Germany) –** This paper proposes to change the descriptive text in Column 2 of the DGL for UN 2031. Germany proposes to change the entry for both PGI and II where the description lists 70% nitric acid as a variable in the classification. If the substance contains more than 70% nitric acid, it is classified as Class 8 PGI with a subsidiary risk of division 5.1. The proposal is to change the 70% in both cases to 65%. They indicate this is technically correct to align with the classification criteria in the UN Manual of Tests and Criteria for determination if the substance is a division 5.1 material. **Comments to 2005/27** (ICCA)	The US did not support this proposal. We did not support changes in the description for UN 2031 entry based on circumstantial comparison to an arbitrary reference point within the "liquid oxidizer" test in the Test Manual. It can be viewed that 65% is chosen for the reference point as a "conservative approach". **Result**: The Sub-Committee decided that solutions of nitric acid with more than 65% nitric acid should be considered as oxidizing substances in accordance with the Manual of Tests and Criteria, but agreed with ICCA that this did not justify classification in PG I of solutions with concentration between 65 and 70%. The ICCA proposal for a new line entry for UN 2031 was adopted. Additionally, ICCA stated that they intend to submit a proposal for the next session indicating that PP81 should be applied to IBC02.
2005/28	**Fibres, Rags and Textiles of UN 1372, UN 1387, UN 1856, UN 1857, and UN 3360 (Germany) –** Germany proposes to delete SP 117 from these UN numbers. SP 117 says: "Subject to these Regulations only when transported by sea." They contend these UN numbers should be regulated for land transport (ADR/RID) the same as for maritime transport under the IMDG Code.	We did not support this proposal. Germany was seeking to regulate these UN numbers for land transport with the justification that it would ease inter-modal transport since the materials are regulated under the IMDG Code. We did not believe it is necessary to regulate these materials for the land mode. These materials are not regulated for road and rail transport by the HMR. **Result:** The Sub-Committee did not agree these

		materials should be regulated for land transport and did not adopt this proposal.
2005/29	**Classification of 1 – hydroxybenzotriazole, anhydrous (HoBt), under Division 1.1D (Germany)** – Germany proposes to add the PSN 1-hydroxybenzotriazole, anhydrous to the DGL as a division 1.1D material. They state they have tested this substance and that it meets the definition of a division 1.1D material. They believe since it is not listed separately as a 1.1D material, shippers are not aware of this potential hazard.	We supported this proposal in principle based on the fact that this substance has high sensitivity toward "heating under confinement" i.e. results from Konen Test and Time/Pressure Test. **Result:** The Sub-Committee, along with the US, agreed this substance is a Class 1 substance, but did not believe the test data supported it's classification in Division 1.1D. Germany stated they intend to resubmit this proposal at the next session backed by test series 6 data.
2005/30	**Proposals of amendments to the packing containers of CALCIUM CARBIDE and its safety measures (China) –** China suggests that the current TP7 requirement for Calcium Carbide is too extreme and costly. They suggest there are three elements that affect the combustion or explosion potential. Those elements include: oxygen, acetylene, and source of ignition. The current TP7 addresses eliminating the oxygen content by requiring the air to be eliminated from the vapor space by nitrogen or other means. Instead China proposes to replace the current TP7 requirement with a requirement to ensure the acetylene level is sufficiently low: "For UN1402, the acetylene contents in the container should be controlled to be less than 1% (by volume)".	The US did not support this proposal. The nitrogen purge provides a vital safety barrier by evacuating moisture and preventing moisture from entering after filling. When the container is filled and closed, moisture remaining within the container will allow the generation of acetylene to continue. The nitrogen serves to dilute acetylene content to prevent it from reaching a lower explosive limit. Additionally, the location of the sampling ports is generally near the top of the container. Therefore, it is difficult to get an accurate acetylene sample since acetylene is heavier than air. We questioned some other aspects of their proposal. Specifically, the proposal suggested deleting the current TP7 and replacing it with a

		TP specific to Calcium Carbide. There are 53 other entries that TP7 is assigned to. Also, this paper proposed to add a requirement to maintain less than 1% by volume acetylene content for IBCs. This would be a new requirement and is not required for similar materials in IBCs. **Result:** The Sub-Committee voiced the same concerns as the US held. There was no support for this proposal. However, there was some support for considering the addition of the nitrogen purge requirement to IBC's carrying this material. China agreed to work with EIGA and CGA on a future proposal if appropriate.
2005/31	**Clarification of Special Provision 199 (USA) –** The US proposes to amend SP 199 to clarify that lead compounds that are considered insoluble based on the criteria in the SP are also not subject to the provisions of the UN Model Regulations unless they meet the criteria of another hazard.	US proposal. **Result:** This proposal was adopted.
2005/34	**Portable tank instructions and special provisions for UN 3129, 3148, 3131 and 2813 (USA) -** Currently no portable tank instructions are assigned to water-reactive liquid, n.o.s., water-reactive liquid, corrosive, n.o.s. or to the PG I entries for water-reactive solid, n.o.s and water reactive solid, corrosive, n.o.s. The US proposes to assign tank assignments consistent with the "Guidelines for assigning portable tank requirements to substances in Classes 3 to 9" (see ST/SG/AC.10/25/Add.2). These assignments are consistent with similarly classed entries in the Dangerous Goods List.	US proposal. **Result:** The Sub-Committee agreed to this proposal, but amended it to require a more stringent T Code and to require a nitrogen blanket for PG I n.o.s. entries.

2005/38	**UN 2059 Nitrocellulose solution, flammable – Packing Groups II and III (United Kingdom) -** UN 2059 NITROCELLULOSE SOLUTION, FLAMMABLE with not more than 12.6% nitrogen, by dry mass, and not more than 55% nitrocellulose is currently forbidden in the Model Regulations for carriage in IBCs. The UK is proposing to allow this material in IBC02 (PGII) and IBC03 (PGIII).	We supported this proposal, but recommend some editorial corrections. IB2 (IBC02) and IB3 (IBC03) are authorized for this material in the HMR. **Result:** This proposal was adopted with the modification of the PG III entries, as suggested by the US.
2005/40	**Chemicals in pressure receptacles P400 (1), P401 (1) and P402 (1) (United Kingdom) –** The UK suggests that a requirement added in the 14th UNMR for use of pressure receptacles in P400, 401, and 402 is overly restrictive. The current text states the when transporting a material in a pressure receptacle under these packing instructions, the liquid must be under a layer of inert gas with a gauge pressure of not less than 20kPa. They prefer to use the requirement in PP86 of P400 which states that the air shall be eliminated from the vapor space by nitrogen or other means.	The US supported this proposal. **Result:** There was not a consensus within the Sub-Committee on this proposal. Therefore, the UK indicated they would consider presenting a new proposal at the next session based on comments received.
2005/43	**Discussion of issues on PRBA's lithium ion battery proposals (PRBA) –** PRBA requests consideration of this document be postponed until the next session.	Withdrawn.
2005/44	**Proposed amendment of lithium ion cell and battery size limits in SP 188 (PRBA)** – PRBA requests consideration of this document be postponed until the next session.	Withdrawn.
2005/45	**New entries for lithium ion batteries (PRBA)** – PRBA requests consideration of this document be postponed until the next session.	Withdrawn.
2005/46	**Use of Watt – Hours in place of equivalent lithium content for lithium ion batteries (PRBA)** – PRBA requests	Withdrawn.

	consideration of this document be postponed until the next session.	
2005/47	**Testing of maneb and maneb preparations stabilized against self-heating (UN 2968) with reference to SP 273 (South Africa)** – SP273 outlines a testing standard for maneb and maneb preparations to identify when they do not need to be classified in Division 4.2. South Africa states that the testing of such a large volume of a potentially self-heating substance requires significant precautionary measures. They have developed what they believe to be a simpler method and propose that method be included in the UN Manual of Tests and Criteria.	We did not support this proposal. Before we could support it, we need data and examples to evaluate the validity of the proposed test method. The difficulty raised by South Africa is not only limited to testing of "Maneb and Maneb preparations". The proposed test method should demonstrate that it is applicable to all Div. 4.2 (self-heating substances) before we can consider its inclusion in the Test Manual. **Result:** The Sub-Committee was in agreement with the US position. Experts requested additional information on the test data before further consideration of including this method in the Manual of Tests and Criteria.
2005/48	**Classification of magnesium nitrate hexahydrate (South Africa)** - Magnesium nitrate UN 1474 is classified in the UN Model Regulations as Division 5.1, Packing Group III material. Magnesium nitrate exists in multiple forms differentiated by the degree of hydration (e.g. dihydrate, tetrahydrate and hexahydrate). South Africa presents test data suggesting that magnesium nitrate hexahydrate does not meet the criteria of Division 5.1. Therefore, they propose assignment of a Special Provision indicating that the material is not regulated if it does not meet the test standards for Division 5.1 in the Manual of Tests and Criteria. They propose either a new SP that is unique to magnesium nitrate hexahydrate or assignment of SP223.	We supported this proposal in principle, but requested some editorial modifications. **Result:** The proposal to add a new special provision to UN1474 specifying that magnesium nitrate hexahydrate was not subject to the Model Regulations was adopted.

2005/56	**Class 3 Flammable liquids – Classification criteria (United Kingdom)** – The UK proposes that the text in 2.3.2.5 that provides an exception for viscous materials having a flash point of 23 degrees C or above but less than or equal to 60 degrees C and meeting other criteria as stated is incomplete. They state that such a substance is not regulated if toxic or corrosive, since that is a specific criterion for exclusion. However, if that same material meets the criteria of an environmentally hazardous substance it would be regulated as a flammable liquid. They propose to add the words "…or environmentally hazardous substance," in 2.3.2.5 at the end of the second bullet.	The US supported this proposal. **Result:** This proposal was adopted.
	AGENDA ITEM 6 – MISCELLANEOUS PROPOSALS OF AMENDMENTS TO THE MODEL REGULATIONS ON THE TRANSPORT OF DANGEROUS GOODS	
2005/39	**Security of dangerous goods in transport – Addition to the High Consequence dangerous Goods Indicative List (United Kingdom) –** The UK proposes that certain explosives of Division 1.4 should be included on the indicative list of high consequence dangerous goods in Chapter 1.4. The list currently includes all explosives in Division 1.1, 1.2 and 1.5; as well as Division 1.3C. Division 1.4 is currently excluded from the list. Of particular security concern is detonators, detonating cord, and shaped charges. This paper proposes adding 13 UN numbers in Division 1.4 to the list of high consequence dangerous goods.	The US was tentatively in support of this proposal pending receipt of additional information prior to the meeting. After receiving some concerns, we suggested it would be prudent to defer this proposal until the next session to allow further review. **Result:** This proposal was adopted.
2005/41	**Remanufactured portable tanks (United Kingdom) –** The UK is concerned about portable tanks remanufacturing process whereby an existing tank shell and service equipment are removed from the supporting framework and placed into new framework for continued use. If this process	The US was not in support of this paper. We indicated that supported the proposal in principle, but we felt the proposal required more work. The situation identified by the UK of replacing an old tank onto a new frame is only one situation that

	results in the application of a new data plate, it could lead to a marking for a misleading date of manufacture.	can be considered under remanufacture. We were interested in seeking industry input in order to assist the UK in amending their proposal. **Result:** Several delegations indicated that the situation described by the UK paper was actually a repaired portable tank, not remanufacture. Numerous experts expressed the opinion that the practice of indicating a new construction date corresponding to the remanufacture date on the data plate was incorrect and that the problem should be addressed through proper enforcement. The UK stated they will reconsider if a new proposal is necessary based on the comments received.
2005/53	**Tank special provisions TP6, TP9 and TP12 (USA)** – At the 27th session, the US presented an informal document (27/INF.23) proposing amendments to several portable tank special provisions. This paper is a formal proposal to delete TP6, TP9, and TP12.	US proposal. **Result:** The proposal to delete special provision TP9 was adopted for all entries except UN 3375. The proposal to delete TP12 was also adopted since it was recognized that the provision did not specify a requirement. The Sub-Committee did not adopt the proposal to delete TP6 since it was felt Chapter 6.7 did not provide for equivalent requirements.
2005/58	**Self-reactive substances (ICAO)** - ICAO identifies that in 2.4.2.3.1.1 there are two notes (Note 2 and 3) that contain mandatory requirements.	We didn't agree that the notes present a problem. There are other areas within the UNMR where requirements are provided within a Note. **Result**: The Sub-Committee recognized that different legal instruments dealt with the

		mandatory nature of note in different ways. This problem has only been raised by the ICAO TI, which is not currently aligned in its paragraph numbering system with the UN Model Regulations. The Sub-Committee did not agree with this proposal and would not agree to an editorial review of all the notes that presently contain mandatory requirements.
2005/59	**Infectious Substances (ICAO) –** ICAO proposes some clarifications and amendments to the UN Model Regulations requirements for Infectious Substances.	The US supported the proposed amendments except for one, in the interest of inter-modal harmonization. We did not agree with making the packaging conditions under 2.6.3.2.3.6 mandatory for exempt human or animal specimens. **Result:** The proposals present by ICAO were not adopted.
INF.38	**Infectious Substances – comments to 2005/59** (Germany) – Germany presents two additional proposals related to Infectious Substances.	**Result:** Germany's proposal to delete the reference to the detection of antibodies at the end of the Note in 2.6.3.2.3.6 was adopted
INF.9	**Infectious Substances – Exemptions** (Germany) - Germany presents three proposals for 2.6.3.2.3.	**Result:** Proposals 2 and 3 of this document were adopted.
INF.39	**Infectious Substances – Definition of Cultures** (Germany) This paper proposes to change the definition of cultures. Germany suggests a definition as biological cultures and to separate into cultures for diagnostic purposes and those for industrial or scientific use.	**Result:** Some delegations expressed concern for changing this definition after difficult deliberations on this during the last biennium. Other experts supported the intention of this proposal. Germany stated they would submit a formal proposal at the next session.
	AGENDA ITEM 7 – HARMONIZATION WITH THE INTERNATIONAL ATOMIC ENERGY AGENCY (IAEA) REGULATIONS FOR THE SAFE TRANSPORT OF RADIOACTIVE MATERIAL	
	There are no documents submitted under this agenda item.	

	AGENDA ITEM 8 – OPTIONS TO FACILITATE GLOBAL HARMONIZATION OF TRANSPORT OF DANGEROUS GOODS REGULATIONS WITH THE UN MODEL REGULATIONS	
2005/20	**World Convention** (Canada and United Kingdom) – This is the same paper that was presented for discussion at the previous session of the Sub-Committee. The expert from Italy, in ST/SG/AC.10/C.3/2004/32, originally discussed the issue of enhancing global harmonization of dangerous goods transport requirements. This paper, submitted jointly from Canada and the UK, is presented on more of an informal basis with a view to promote and encouraging discussion of the issues outlined in 2004/32. This paper is clear to point out the concepts contained within do not represent the views of the Government of the United Kingdom or the Government of Canada. This paper attempts to address various key issues: 1. The basic mandate of the Sub-Committee; 2. The core requirements in the Model Regulations that should be adopted globally such as classification and the dangerous goods list, packaging, documentation, and marks, labels and placards; 3. How the Sub-Committee could include compliance issues in its deliberations, including cross-country enforcement; 4. Improving the text of the Model Regulations to make it readily adoptable as an enforceable legal instrument; 5. Training and assistance for countries in transition such as the way in which IAEA has experts who provide such	The U.S. welcomed discussion on efforts to enhance global harmonization of the dangerous goods transport regulations. This paper suggested numerous possible options for the future to facilitate discussion on the topic. We continue to support harmonization efforts within the UN TDG Sub-Committee, modal and National regulations. However, this paper includes a suggestion for establishing a new multi-modal World Convention. The experts from Canada and UK pointed out this suggestion has been tabled twice in the past. The paper doesn't necessarily promote establishment of a World Convention but does provide some helpful background. During the last session, the Sub-Committee held an informal discussion during plenary to discuss delegation views and possible options for future work in this area. An area of particular interest seemed to be discussion on relations with other dangerous goods regulatory bodies. Understandably, both ICAO and IMO expressed their concerns over the suggestion of a World Convention and the impact on existing conventions. It was suggested that such a convention could exclude from its scope maritime and air transport; or could include but still place

	advice; 6. The way in which the Sub-Committee works; and 7. The Sub-Committee's relationship with other UN and regional bodies.	the responsibility of those mode specific issue under the ICAO and IMO. This would allow common provisions for all modes of transport under one instrument but not prevent modal administrations for addressing mode specific or operational considerations in a separate instrument. In addition to examples where the modal regulations differed slightly, some delegations voiced issues with the lack of harmonization between national inland transport regulations which impede international transport. We will continue to keep an open mind and actively participate in discussions related to opportunities for enhancing harmonization, but do not support establishing a World Convention.
INF.16	Two step approach to global harmonization (Italy)	**Result**: The Sub-Committee held some general discussions on the potential for developing a World Convention, then discussed at length the two step approach suggested by Italy. Several experts supported the two step approach, emphasizing the importance of step one which included improved cooperation between national delegations that participate in various international organizations. The Sub-Committee would then evaluate in the 2007-2008 biennium if improved cooperation between the Sub-Committee and the international modal organizations provided any improvements before considering further the proposal to develop a

		World Convention. The US supported this approach and still questioned how a World Convention could improve the current process. Some experts stated that the level of harmonization has improved greatly between the modal regulations and the UN Model Regulations, rather the problems arise with varying national regulations. Another area where progress could be realized was in harmonizing the dates of entry into force of amendments to the various existing documents.
	AGENDA ITEM 9 – IMPROVEMENT OF HAZARD COMMUNICATION	
2005/50	**Tolerance for label deviating from the models of chapter 5.2 (United Kingdom)** – In this paper, the UK attempts to address the problem of minor variations in label designs and printing. These conflicts arise from modal differences and individual printing variances, but do not cause confusion with identifying the purpose of the label or have negative safety implications. The UK proposes a statement in 5.2.2.2.1, "Minor variations from the specimens shown, which do not affect the obvious meaning of the labels is permitted."	The US supported this proposal. Although we support continuing efforts by modal and national regulations to align label designs with those shown in the UN Model Regulations, we have experienced difficulties with the minor printing variations as referenced in the UK paper. We believed this to be a practical approach to prevent unnecessary shipment delay or enforcement actions. **Result:** There was little support for this proposal. Experts felt inspectors should not be concerned with such minor variations and that the proposed language would place the responsibility of making judgment calls that would not be consistent. The UK withdrew their proposal and indicated they would consider submitting a new proposal based on the comments received.
2005/54	**Stenciling of the UN Mark (DGAC)** – This paper discusses	The US supported this proposal. We have issued

	the problem of interpreting the requirement to mark the UN symbol as a continuous circle. DGAC points out that one common technique to apply markings is to stencil. Stenciling leaves small gaps in the applied symbols, letters, and numbers. The paper proposes text to allow for these small gaps due to stenciling.	an interpretation letter that provides essentially the same clarification. **Result:** There was little support for this proposal. This document was considered at the same time as the UK 2005/50 paper and many of the same opinions were expressed. DGAC withdrew their proposal and indicated they would consider submitting a new proposal based on the comments received.
INF.23	**Position of UN Number and Hazard Description on Labels and Placards** (USA) The US proposes to amend the text in 5.2.2.2.1.3 (for labels) and 5.3.2.1.2 (for placards) to allow text the number to be placed across the middle of the label/placard, as is the current and preferable practice. Current text states these entries must be in the lower half.	**Result**: This proposal was adopted.
	AGENDA ITEM 10 – GUIDING PRINCIPLES FOR THE MODEL REGULATIONS	
2005/51	**Guiding principles for the assignment of portable tank requirements (USA)** – The Guiding Principles are intended to provide the Sub-Committee with a framework to apply when considering amendments to the UN Model Regulations. This paper consolidates proposals made by the US at the 27th session (INF.23 and INF.34). The US proposal provides comprehensive guidelines for substances in the Dangerous Goods List. The guidelines are provided in two parts. Part I provides general guidance on prohibited substances and tank design. Part II provides guidance on assignment of tank codes and special provisions (TP notes) for individual substances.	US proposal. **Result:** There was general support for the effort presented in this document. Experts were requested to send comments to the US. The US intends to consolidate the comments and provide to the UK for inclusion in the comprehensive Guiding Principles document that should be proposed at the next session.
2005/52	**IBC authorizations for inclusion in the Guiding Principles (USA) –** The US is proposing guidance for the	US proposal.

	assignment of IBC Packing Instruction for inclusion into the Guiding Principles document. In this document the US presents a listing of the current IBC Packing Instruction assignments (2005/52/Add.1) and a listing of substances not authorized in IBC packaging (2005/52/Add.2). The paper proposes a rationalized approach for future assignments of IBC codes. The Sub-Committee is invited to comment. IBC Special Provisions will be developed for consideration at a future session. **Guidance for Assigning IBC Special Provisions** (USA)	**Result:** There was general support for the effort presented in this document. Experts were requested to send comments to the US. The US intends to consolidate the comments and provide to the UK for inclusion in the comprehensive Guiding Principles document that should be proposed at the next session.
INF.37		
	AGENDA ITEM 11 – OTHER BUSINESS	
2005/36	**Identification of some open issues not yet properly addressed in the GHS (Germany)** – Germany states that certain types of hazards which are partly addressed by the UN Model Regulations are not completely addressed by the GHS. They provide a list of physical hazards they suggest should be considered by GHS.	The US did not support this proposal. We did not agree that these issues are "not yet properly addressed in the GHS" or that new work is needed to close gaps in coverage of physical hazards. The TDG/ILO working group that developed the GHS criteria for physical hazards specifically considered these issues, and reached consensus on the current provisions. In the absence of a clearly demonstrated need to close significant gaps in coverage, we believe it is important to maintain stability in the system and avoid continual tinkering with the GHS and revisiting issues considered during the negotiations that produced the current system. Some of the specific concerns we had with this proposal include:

		(1) Ammonium nitrate has been assessed fully for its potential explosive properties. If additional testing or evaluation is needed it should be brought to the attention of TDG for consideration. The UN system (TDG or GHS) should not be based on the EU or other National systems. (2) Both the TDG and GHS systems already cover substances not intended to be used as explosives but that have explosive properties. If a delegation has evidence of a substance that is not currently classified as an explosive, but should be, they should follow the process of submitting a formal proposal to the TDG or GHS to include that specific substance as a Class 1 material. (3) GHS intentionally decided not to cover Articles; whether they have explosive properties or not. An explosive (article or substance) which is not packed but is being moved within a manufacturing facility is outside the scope of the TDG. (4) Concerns with desensitized explosives should be dealt with by the appropriate use of "communication of hazard requirements" such as the use of an MSDS, shipping paper and precautionary label etc. (5) We do not see the necessity of listing every test method for any criterion mentioned in the UN Model Regulations or GHS Book. (6) Chemically and thermally unstable substances are already covered in the TDG and GHS systems.

		Results: The Sub-Committee discussed the paper with varying views. Some experts felt the issues brought up in the paper were already adequately addressed, while others agreed with the concerns expressed by Germany. The Sub-Committee agreed that if the GHS Sub-Committee decided to pursue the issues presented in the paper, that the TDG has the responsibility to work these concerns. The Sub-Committee felt this work might not be completed in this biennium but should be discussed at the July 2006 session as the working group on explosives will be meeting. Germany agreed to submit a new proposal for the next session.